

10/519208

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* * * * * Welcome to STN International * * * * *

NEWS 1 Web Page for STN Seminar Schedule - N. America
NEWS 2 MAY 01 New CAS web site launched
NEWS 3 MAY 08 CA/CAPplus Indian patent publication number format defined
NEWS 4 MAY 14 RDISCLOSURE on STN Easy enhanced with new search and display fields
NEWS 5 MAY 21 BIOSIS reloaded and enhanced with archival data
NEWS 6 MAY 21 TOXCENTER enhanced with BIOSIS reload
NEWS 7 MAY 21 CA/CAPplus enhanced with additional kind codes for German patents
NEWS 8 MAY 22 CA/CAPplus enhanced with IPC reclassification in Japanese patents
NEWS 9 JUN 27 CA/CAPplus enhanced with pre-1967 CAS Registry Numbers
NEWS 10 JUN 29 STN Viewer now available
NEWS 11 JUN 29 STN Express, Version 8.2, now available
NEWS 12 JUL 02 LEMBASE coverage updated
NEWS 13 JUL 02 LMEDLINE coverage updated
NEWS 14 JUL 02 SCISEARCH enhanced with complete author names
NEWS 15 JUL 02 CHEMCATS accession numbers revised
NEWS 16 JUL 02 CA/CAPplus enhanced with utility model patents from China
NEWS 17 JUL 16 CAPplus enhanced with French and German abstracts
NEWS 18 JUL 18 CA/CAPplus patent coverage enhanced
NEWS 19 JUL 26 USPATFULL/USPAT2 enhanced with IPC reclassification
NEWS 20 JUL 30 USGENE now available on STN
NEWS 21 AUG 06 CAS REGISTRY enhanced with new experimental property tags
NEWS 22 AUG 06 BEILSTEIN updated with new compounds
NEWS 23 AUG 06 FSTA enhanced with new thesaurus edition
NEWS 24 AUG 13 CA/CAPplus enhanced with additional kind codes for granted patents
NEWS 25 AUG 20 CA/CAPplus enhanced with CAS indexing in pre-1907 records
NEWS 26 AUG 27 Full-text patent databases enhanced with predefined patent family display formats from INPADOCDB
NEWS 27 AUG 27 USPATOLD now available on STN

NEWS EXPRESS 29 JUNE 2007: CURRENT WINDOWS VERSION IS V8.2,
CURRENT MACINTOSH VERSION IS V6.0c(ENG) AND V6.0Jc(JP),
AND CURRENT DISCOVER FILE IS DATED 05 JULY 2007.

NEWS HOURS STN Operating Hours Plus Help Desk Availability
NEWS LOGIN Welcome Banner and News Items
NEWS IPC8 For general information regarding STN implementation of IPC 8

Enter NEWS followed by the item number or name to see news on that specific topic.

10/519208

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* * * * * STN Columbus * * * * *

FILE 'HOME' ENTERED AT 13:37:27 ON 27 AUG 2007

=> file reg

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

0.21

0.21

FILE 'REGISTRY' ENTERED AT 13:37:35 ON 27 AUG 2007

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STRUCTURE FILE UPDATES: 26 AUG 2007 HIGHEST RN 945604-45-5

DICTIONARY FILE UPDATES: 26 AUG 2007 HIGHEST RN 945604-45-5

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH June 29, 2007

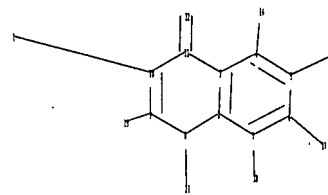
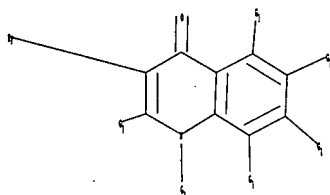
Please note that search-term pricing does apply when conducting SmartSELECT searches.

REGISTRY includes numerically searchable data for experimental and predicted properties as well as tags indicating availability of experimental property data in the original document. For information on property searching in REGISTRY, refer to:

<http://www.cas.org/support/stngen/stndoc/properties.html>

=>

Uploading C:\Program Files\Stnexp\Queries\2222.str



chain nodes :

1 12 14 15 17 18 19 21

ring nodes :

2 3 4 5 6 7 8 9 10 11

chain bonds :

1-10 4-14 5-15 6-17 7-18 8-21 9-19 11-12

ring bonds :

2-3 2-7 2-8 3-4 3-11 4-5 5-6 6-7 8-9 9-10 10-11

exact/norm bonds :

1-10 2-8 3-11 4-14 5-15 6-17 7-18 8-9 8-21 9-10 9-19 10-11 11-12

normalized bonds :

2-3 2-7 3-4 4-5 5-6 6-7

G1:C,H,O

G2:H,Cb,Cy,Hy

G3:C,H,O,Cb,Cy,Hy

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:CLASS 14:CLASS 15:CLASS 17:CLASS 18:CLASS 19:CLASS 21:CLASS

10/519208

L1 STRUCTURE UPLOADED

=> s l1 full

FULL SEARCH INITIATED 13:37:48 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 754204 TO ITERATE

100.0% PROCESSED 754204 ITERATIONS

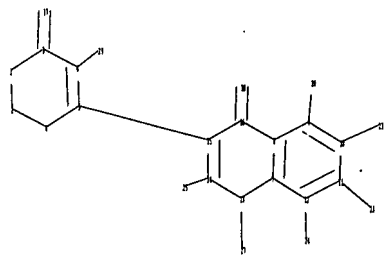
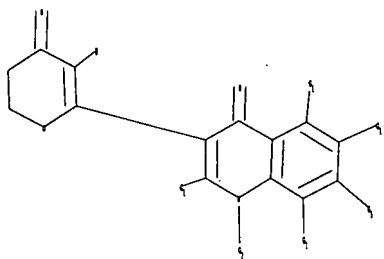
59 ANSWERS

SEARCH TIME: 00.00.05

L2 59 SEA SSS FUL L1

=>

Uploading C:\Program Files\Stnexp\Queries\1111.str



chain nodes :

17 18 20 21 23 24 25 27 29

ring nodes :

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

chain bonds :

3-17 4-29 5-15 9-20 10-21 11-23 12-24 13-27 14-25 16-18

ring bonds :

1-3 1-2 2-6 3-4 4-5 5-6 7-8 7-12 7-13 8-9 8-16 9-10 10-11 11-12 13-14
14-15 15-16

10/519208

exact/norm bonds :

1-3 1-2 2-6 3-4 3-17 4-5 5-6 7-13 8-16 9-20 10-21 11-23 12-24 13-14
13-27 14-15 14-25 15-16 16-18

exact bonds :

4-29 5-15

normalized bonds :

7-8 7-12 8-9 9-10 10-11 11-12

G1:C,H,O

G2:H,Cb,Cy,Hy

G3:C,H,O,Cb,Cy,Hy

Match level :

1:Atom 2:Atom 3:Atom 4:Atom 5:Atom 6:Atom 7:Atom 8:Atom 9:Atom 10:Atom
11:Atom 12:Atom 13:Atom 14:Atom 15:Atom 16:Atom 17:CLASS 18:CLASS 20:CLASS
21:CLASS 23:CLASS 24:CLASS 25:CLASS 27:CLASS 29:CLASS

L3 STRUCTURE UPLOADED

=> s 13 full

FULL SEARCH INITIATED 13:38:13 FILE 'REGISTRY'

FULL SCREEN SEARCH COMPLETED - 8524 TO ITERATE

100.0% PROCESSED 8524 ITERATIONS

21 ANSWERS

SEARCH TIME: 00.00.02

L4 21 SEA SSS FUL L3

=> file ca

COST IN U.S. DOLLARS

SINCE FILE

TOTAL

ENTRY

SESSION

FULL ESTIMATED COST

343.75

343.96

FILE 'CA' ENTERED AT 13:38:17 ON 27 AUG 2007

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FILE COVERS 1907 - 23 Aug 2007 VOL 147 ISS 10

FILE LAST UPDATED: 23 Aug 2007 (20070823/ED)

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10/519208

This file contains CAS Registry Numbers for easy and accurate
substance identification.

=> s 14

L5 1 L4

=> s 12

L6 14 L2

=> s 16 not 15

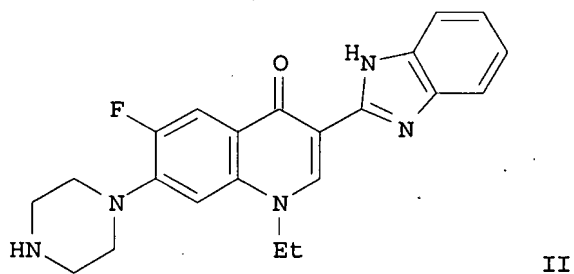
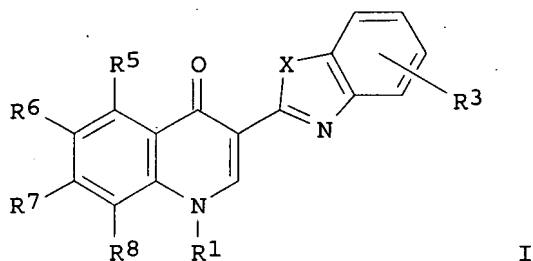
L7 13 L6 NOT L5

=> d ibib abs fhitstr 1-13

10/519208

L7 ANSWER 1 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 142:373862 CA
TITLE: Preparation of quinolone derivatives as antitumor agents
INVENTOR(S): You, Qidong; He, Xungui; Li, Zhiyu; Chen, Xiaoguang; Li, Yan; Li, Hongyan; Zhang, Wenming
PATENT ASSIGNEE(S): China Pharmaceutical University, Peop. Rep. China; Institute of Pharmacy, Chinese Academy of Medical Science
SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 34 pp. CODEN: CNXXEV
DOCUMENT TYPE: Patent
LANGUAGE: Chinese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	-----	-----	-----	-----
CN 1473827	A	20040211	CN 2003-132296	20030811
PRIORITY APPLN. INFO.:			CN 2003-132296	20030811
OTHER SOURCE(S):	MARPAT 142:373862			
GI				



AB The title compds. I [wherein R1 = H, (un)substituted alkyl, arylalkyl, heterocyclyl, or aryl; R3 and/or R5 = H, halo, NO2, NH2, CN, OH, alkoxy, alkyl, arylalkyl, heterocyclyl, or aryl; R6 and/or R7 = H, halo, OH, alkyl, alkoxy, aryloxy, etc.; R8 = H, halo, alkyl, NO2, NH2, CN, OH, alkoxy, etc.; and X = O, S, or NH; with exclusions] are prepared, as antitumor agents, by cyclizing the carboxylic acid of quinolone derivative with o-phenylenediamine, 2-aminophenol, or 2-aminobenzenethiol in the presence of polyphosphoric acid (PPA). For example, the compound II was prepared by cyclizing norfloxacin with 1,2-benzenediamine in PPA (23.4%). I showed strong antitumor activity in cow.

IT 849643-48-7P

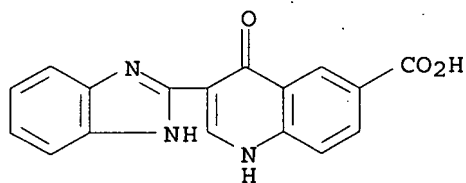
10/519208

RL: PAC (Pharmacological activity); SPN (Synthetic preparation); THU
(Therapeutic use); BIOL (Biological study); PREP (Preparation); USES
(Uses)

(antitumor agent; preparation of quinolone derivs. as antitumor agents)

RN 849643-48-7 CA

CN 6-Quinolinecarboxylic acid, 3-(1H-benzimidazol-2-yl)-1,4-dihydro-4-oxo-
(9CI) (CA INDEX NAME)

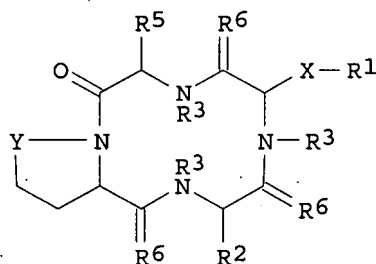


10/519208

L7 ANSWER 2 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 138:287984 CA
TITLE: Preparation of apicidin-derived cyclic tetrapeptides
INVENTOR(S): Meinke, Peter T.; Schmatz, Dennis; Myers, Robert W.;
Rattray, Sandra J.; Colletti, Steven L.; Wyvratt,
Matthew J.; Fisher, Michael H.; Gurnett, Anne M.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 104 pp., Cont.-in-part of U.S.
Ser. No. 614,793.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2003078369	A1	20030424	US 2002-66451	20020131
PRIORITY APPLN. INFO.:			US 1999-145329P	P 19990723
			US 2000-614793	A2 20000712

OTHER SOURCE(S): MARPAT 138:287984
GI



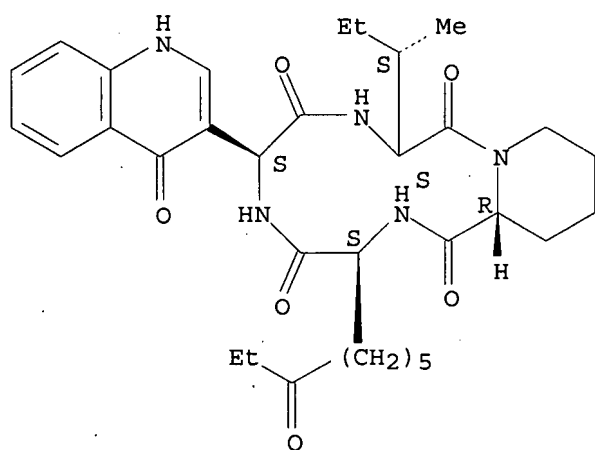
AB Cyclic tetrapeptide compds. I [X = CH₂, CO, CHOH, alkoxy- or aryloxymethylene, etc., :CH, or not present; Y = (CH₂)_n, where n = 1 or 2; R₁ = H, alkyl, aryl, acyl, CN, CO₂H or ester, carboxamido, etc.; R₂ = (un)substituted alkyl, alkenyl, or alkynyl, alkoxy, alkoxyalkyl; R₃ = H, halo, OH, alkoxy, aryloxy, etc., alkyl, aryl; R₅ = iso-Pr, sec-butyl; R₆ = O, S, H₂ (with provisos)] derived from apicidin were prepared for therapeutic inhibition of histone deacetylase activity. Thus, treating 300 mg apicidin with 18 mg NaBH₄ in MeOH and stirring 4 h at room temperature afforded carbonyl reduction product cyclo(N-O-methyl-L-Trp-L-Ile-D-Pip-L-2-amino-8-hydroxydecanoyl) (pip = pipecolic acid residue).

IT 189337-32-4P
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)
(preparation of apicidin-derived cyclic tetrapeptides)

RN 189337-32-4 CA
CN Cyclo[(2S)-2-amino-8-oxodecanoyl-(2S)-2-(1,4-dihydro-4-oxo-3-quinolinyl)glycyl-L-isoleucyl-(2R)-2-piperidinecarbonyl] (9CI) (CA INDEX NAME)

Absolute stereochemistry.

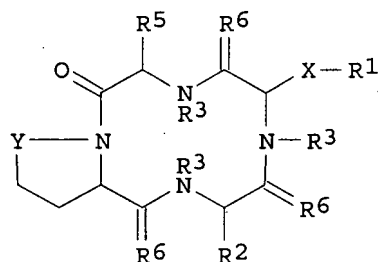
10/519208



10/519208

L7 ANSWER 3 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 134:131817 CA
TITLE: Preparation of apicidin-derived cyclic tetrapeptides
INVENTOR(S): Meinke, Peter T.; Schmatz, Dennis; Fisher, Michael H.;
Rattray, Sandra J.; Colletti, Steven L.; Wyvratt,
Matthew J.; Myers, Robert W.; Gurnett, Anne M.
PATENT ASSIGNEE(S): Merck & Co., Inc., USA
SOURCE: PCT Int. Appl., 229 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001007042	A1	20010201	WO 2000-US19627	20000719
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
CA 2378849	A1	20010201	CA 2000-2378849	20000719
EP 1204411	A1	20020515	EP 2000-947507	20000719
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL				
JP 2003505417	T	20030212	JP 2001-511926	20000719
PRIORITY APPLN. INFO.:			US 1999-145329P	P 19990723
			WO 2000-US19627	W 20000719
OTHER SOURCE(S):		MARPAT 134:131817		
GI				



AB Cyclic tetrapeptide compds. I [X = CH₂, CO, CHOH, alkoxy- or aryloxymethylene, etc., :CH, or not present; Y = (CH₂)_n, where n = 1 or 2; R₁ = H, alkyl, aryl, acyl, CN, CO₂H or ester, carboxamido, etc.; R₂ = (un)substituted alkyl, alkenyl, or alkynyl, (CH₂)_{nii}-O-(CH₂)_{mii}, where nii = 0-7; R₃ = H, halo, OH, alkoxy, aryloxy, etc., alkyl, aryl; R₅ = iso-Pr, sec-butyl; R₆ = O, S, H₂ (with provisos)] derived from apicidin were prepared for therapeutic inhibition of histone deacetylase activity. Thus, treating 300 mg apicidin with 18 mg NaBH₄ in MeOH and stirring 4 h

10/519208

at room temperature afforded carbonyl reduction product
cyclo(N-O-methyl-L-Trp-L-Ile-

D-Pip-L-2-amino-8-hydroxydecanoyl) (pip = pipecolic acid residue).

IT 189337-32-4P

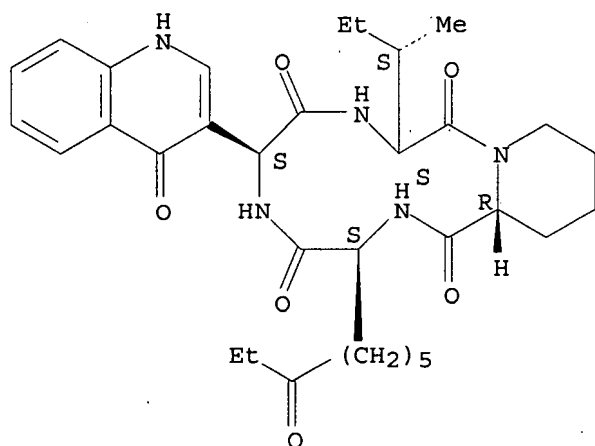
RL: SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses)

(preparation of apicidin-derived cyclic tetrapeptides)

RN 189337-32-4 CA

CN Cyclo[(2S)-2-amino-8-oxodecanoyl-(2S)-2-(1,4-dihydro-4-oxo-3-quinolinyl)glycyl-L-isoleucyl-(2R)-2-piperidinecarbonyl] (9CI) (CA INDEX NAME)

Absolute stereochemistry.



REFERENCE COUNT:

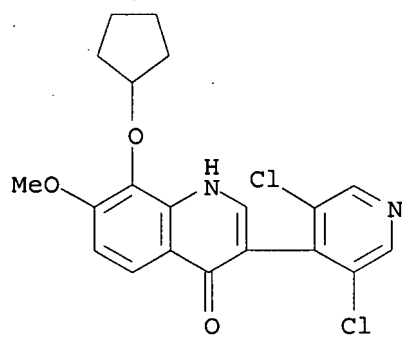
5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 4 OF 13 CA COPYRIGHT 2007 ACS on STN
 ACCESSION NUMBER: 131:58762 CA
 TITLE: Preparation of benzazine derivatives as
 phosphodiesterase 4 inhibitors
 INVENTOR(S): Napoletano, Mauro; Norcini, Gabriele; Botta, Daniela;
 Grancini, Giancarlo; Morazzoni, Gabriele
 PATENT ASSIGNEE(S): Zambon Group S.p.A., Italy
 SOURCE: PCT Int. Appl., 37 pp.
 CODEN: PIXXD2
 DOCUMENT TYPE: Patent
 LANGUAGE: English
 FAMILY ACC. NUM. COUNT: 1
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9932449	A2	19990701	WO 1998-EP8292	19981217
WO 9932449	A3	19990930		
W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: GH, GM, KE, LS, MW, SD, SZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 9922742	A	19990712	AU 1999-22742	19981217
EP 1060173	A2	20001220	EP 1998-966359	19981217
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 2001526264	T	20011218	JP 2000-525386	19981217
US 6297257	B1	20011002	US 2000-581505	20000713
PRIORITY APPLN. INFO.:			IT 1997-MI2807	A 19971219
			WO 1998-EP8292	W 19981217
GI	For diagram(s), see printed CA Issue.			
AB	The title compds. I [A = ortho-condensed heterocycle optionally substituted by (C1-4)alkyl, (C1-4)alkoxy or COOR', and necessarily substituted by a -BCy group wherein B is methylene, ethylene, amino, CONH or a bond; and is a 5- or 6-membered heterocycle containing from 1 to 3 nitrogen atom(s) optionally substituted by one or more halogen(s); R1 = (C1-6)alkyl, polyfluoro(C1-6)alkyl group; R2 = aryl, aryl(C1-10)alkyl, (C4-7)cycloalkyl group optionally containing an oxygen atom and optionally substituted by a polar substituent], PDE 4 and TNF α inhibitors, were prepared E.g., 7-cyclopentyloxy-1-(3,5-dichloropyridin-4-ylmethyl)-6-methoxy-3,4-dihydroisoquinoline hydrochloride was prepared			
IT	227781-32-0P RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (preparation of benzazine derivs. as phosphodiesterase 4 and TNF α inhibitors)			
RN	227781-32-0 CA			
CN	4(1H)-Quinolinone, 8-(cyclopentyloxy)-3-(3,5-dichloro-4-pyridinyl)-7-methoxy- (9CI) (CA INDEX NAME)			

10/519208



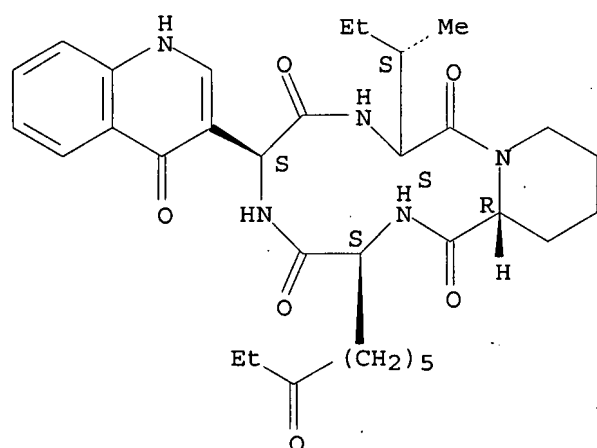
10/519208

L7 ANSWER 5 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 126:312246 CA
TITLE: Histone deacetylase as target for antiprotozoal
agents, and antiprotozoal compound identification
method
INVENTOR(S): Dulski, Paula M.; Gurnett, Anne M.; Myers, Robert W.;
Rattray, Sandra J.; Schmatz, Dennis M.
PATENT ASSIGNEE(S): Merck and Co., Inc., USA; Dulski, Paula M.; Gurnett,
Anne M.; Myers, Robert W.; Rattray, Sandra J.;
Schmatz, Dennis M.
SOURCE: PCT Int. Appl., 40 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 9711366	A1	19970327	WO 1996-US14826	19960916
W: AL, AM, AU, AZ, BA, BB, BG, BR, BY, CA, CN, CU, CZ, EE, GE, HU, IL, IS, JP, KG, KR, KZ, LC, LK, LR, LT, LV, MD, MG, MK, MN, MX, NO, NZ, PL, RO, RU, SG, SI, SK, TJ, TM, TR, TT, UA, US, UZ, VN, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM				
RW: KE, LS, MW, SD, SZ, UG, AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG				
CA 2231251	A1	19970327	CA 1996-2231251	19960916
AU 9669790	A	19970409	AU 1996-69790	19960916
AU 712801	B2	19991118		
EP 855024	A1	19980729	EP 1996-930894	19960916
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, PT, IE, FI				
JP 11514857	T	19991221	JP 1996-512810	19960916
US 6428983	B1	20020806	US 1999-296834	19990422
PRIORITY APPLN. INFO.:				
			US 1995-4065P	P 19950920
			GB 1996-2974	A 19960213
			WO 1996-US14826	W 19960916
			US 1996-716978	A3 19960920
AB	Histone deacetylase inhibition provides a target for identifying potential antiprotozoal compds. Histone deacetylase inhibitors are useful as therapeutic agents against protozoal infections.			
IT	189337-32-4P, Apicidin IIb RL: BAC (Biological activity or effector, except adverse); BSU (Biological study, unclassified); SPN (Synthetic preparation); THU (Therapeutic use); BIOL (Biological study); PREP (Preparation); USES (Uses) (histone deacetylase as target for antiprotozoal agents, and antiprotozoal compound identification method)			
RN	189337-32-4 CA			
CN	Cyclo[(2S)-2-amino-8-oxodecanoyl-(2S)-2-(1,4-dihydro-4-oxo-3- quinolinyl)glycyl-L-isoleucyl-(2R)-2-piperidinecarbonyl] (9CI) (CA INDEX NAME)			

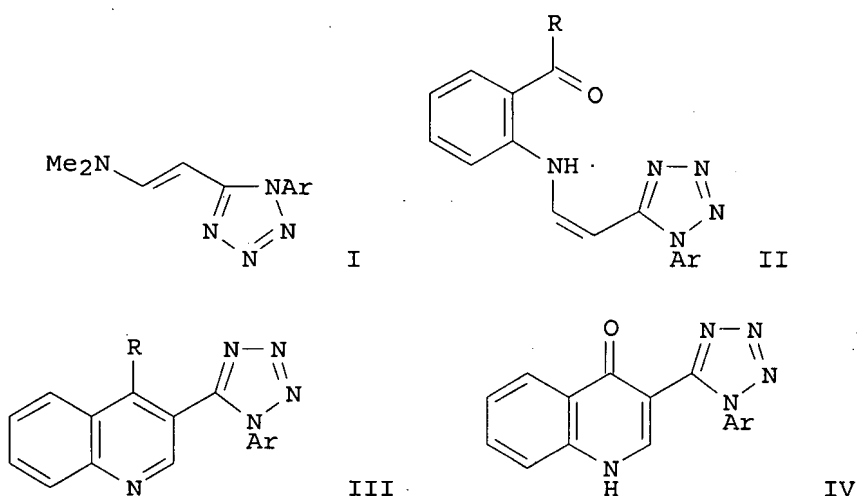
Absolute stereochemistry.

10/519208



10/519208

L7 ANSWER 6 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 122:160565 CA
TITLE: Tetrazole compounds. 9. A new approach to
tetrazolyl-substituted quinoline derivatives
AUTHOR(S): Fischer, Gerhard W.
CORPORATE SOURCE: Inst. Org. Chem., Univ. Leipzig, Leipzig, 04303,
Germany
SOURCE: Journal of Heterocyclic Chemistry (1994), 31(6),
1529-34
CODEN: JHTCAD; ISSN: 0022-152X
PUBLISHER: HeteroCorporation
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 122:160565
GI



AB The acid-catalyzed reaction of 1-aryl-5-(2-dimethylaminovinyl)-1H-tetrazoles I (Ar = Ph, 4-MeC₆H₄, 4-MeOC₆H₄, 4-ClC₆H₄, 4-PhC₆H₄) with arylamines suitably functionalized in the ortho-position resulted in Z-configured transamination products which were cyclized to novel 3-tetrazolylquinolines by the action of sodium ethoxide. Thus, on reacting I with 2-aminoacetophenone or 2-aminobenzophenone, resp., the 2-[2-(1-aryl-1H-tetrazol-5-yl)vinylamino]aryl ketones II (R = Me, Ph) were obtained, the cyclization of which gave 4-substituted 3-(1-aryl-1H-tetrazol-5-yl)quinolines III. In the case of the transamination products II (R = MeO), prepared from I and Me anthranilate, the ring closure afforded 3-(1-aryl-1H-tetrazol-5-yl)-1H-quinolin-4-ones IV. Starting from I and anthranilonitrile 4-amino-3-(1-aryl-1H-tetrazol-5-yl)quinolines III (R = NH₂, Ar = Ph, 4-MeC₆H₄, 4-MeOC₆H₄, 4-FC₆H₄, 4-ClC₆H₄) were obtained.

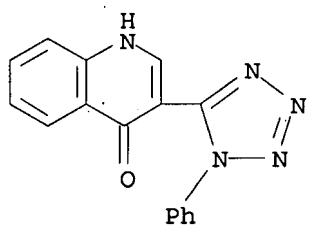
IT 161464-85-3

RL: RCT (Reactant); RACT (Reactant or reagent)
(preparation of tetrazolylquinolines)

RN 161464-85-3 CA

CN 4(1H)-Quinolinone, 3-(1-phenyl-1H-tetrazol-5-yl)-, sodium salt (9CI) (CA
INDEX NAME)

10/519208



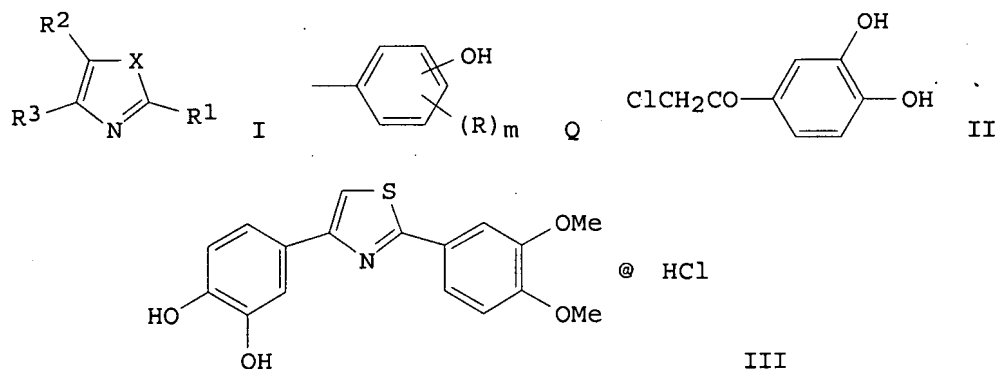
● Na

10/519208

L7 ANSWER 7 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 118:191726 CA
TITLE: Preparation oxazole and thiazole derivatives as active
oxygen inhibitors
INVENTOR(S): Chihiro, Masatoshi; Komatsu, Hajime; Tominaga,
Michiaki; Yabuuchi, Youichi
PATENT ASSIGNEE(S): Otsuka Pharmaceutical Co., Ltd., Japan
SOURCE: PCT Int. Appl., 560 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
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WO 9209586	A1	19920611	WO 1991-JP1659	19911129
W: AU, CA, KR, US				
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LU, NL, SE				
CA 2074933	A1	19920531	CA 1991-2074933	19911129
CA 2074933	C	20021203		
AU 9189367	A	19920625	AU 1991-89367	19911129
AU 656930	B2	19950223		
CA 2396738	A1	19920625	CA 1991-2396738	19911129
CA 2396738	C	20060829		
CA 2547947	A1	19920625	CA 1991-2547947	19911129
EP 513387	A1	19921119	EP 1991-920815	19911129
EP 513387	B1	20000301		
R: CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
JP 05051318	A	19930302	JP 1991-342495	19911129
EP 934937	A1	19990811	EP 1999-107493	19911129
EP 934937	B1	20020227		
R: CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
ES 2144403	T3	20000616	ES 1991-920815	19911129
EP 1130017	A2	20010905	EP 2001-112988	19911129
EP 1130017	A3	20010919		
EP 1130017	B1	20050615		
R: CH, DE, DK, ES, FR, GB, IT, LI, NL, SE				
ES 2173683	T3	20021016	ES 1999-107493	19911129
ES 2245660	T3	20060116	ES 2001-112988	19911129
US 5643932	A	19970701	US 1995-444728	19950519
US 5677319	A	19971014	US 1995-482657	19950607
US 6080764	A	20000627	US 1997-826343	19970325
JP 10101562	A	19980421	JP 1997-233370	19970813
JP 3182556	B2	20010703		
HK 1003938	A1	20000721	HK 1998-103139	19980416
US 37556	E1	20020219	US 1999-245914	19990208
PRIORITY APPLN. INFO.:				
			JP 1990-337727	A 19901130
			CA 1991-2074933	A3 19911129
			CA 1991-2396738	A3 19911129
			EP 1991-920815	A3 19911129
			EP 1999-107493	A3 19911129
			JP 1991-342495	A3 19911129
			WO 1991-JP1659	A 19911129
			US 1992-916082	B1 19920729
			US 1995-444728	A3 19950519
			US 1995-482657	A3 19950607

OTHER SOURCE(S): MARPAT 118:191726
GI



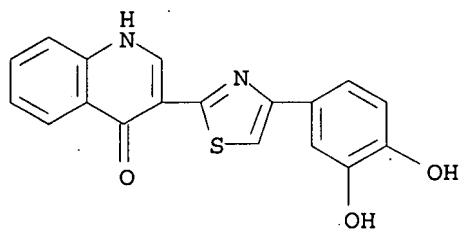
AB The title compds. [I; R¹ = (substituted) Ph; R² = H, halo, alkyl, Ph alkoxy carbonyl, alkylamino, etc.; R³ = Q (wherein R = OH, CO₂H, alkyl, alkenyl; m = 0-2); X = S, O], useful in treating thrombosis, arteriosclerosis, peptic ulcers, etc., are prepared. A suspension of 367 mg II and 430 mg 3,4-(MeO)₂C₆H₃CSNH₂ in EtOH was refluxed to give 160 mg thiazole salt III, which showed IC₅₀ of 1 μM against superoxide formation. I were also effective in treating arrhythmia, ischemic renal disorders, and myocardial necrosis.

IT 145737-06-0P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of, as active oxygen inhibitor)

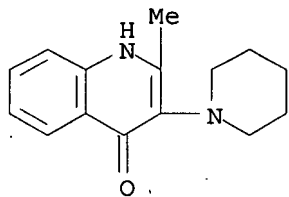
RN 145737-06-0 CA

CN 4(1H)-Quinolinone, 3-[4-(3,4-dihydroxyphenyl)-2-thiazolyl]- (9CI) (CA INDEX NAME)



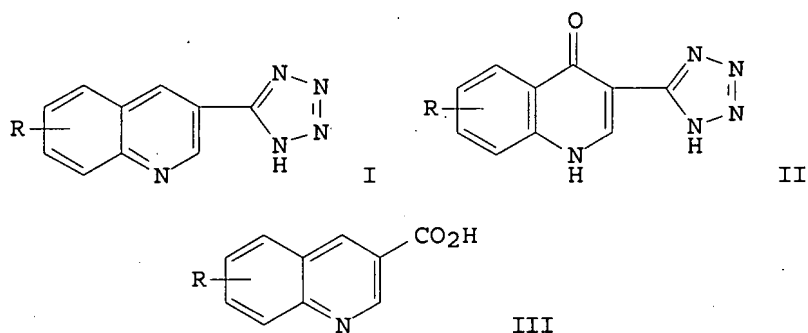
10/519208

L7 ANSWER 8 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 103:215129 CA
TITLE: Novel nucleophilic substitution of alkyl
bromo-2(1H)-pyridones
AUTHOR(S): Pessolano, A. A.; Witzel, B. E.; Graham, P. M.; Clark,
R. L.; Jones, H.; Dorn, C. P., Jr.; Carty, J.; Shen,
T. Y.
CORPORATE SOURCE: Merck Sharp and Dohme Res. Lab., Rahway, NJ, 07065,
USA
SOURCE: Journal of Heterocyclic Chemistry (1985), 22(2),
265-72
CODEN: JHTCAD; ISSN: 0022-152X
DOCUMENT TYPE: Journal
LANGUAGE: English
OTHER SOURCE(S): CASREACT 103:215129
AB Nucleophilic substitution of certain alkyl bromo-2(1H)-pyridones gave
unexpected products where the alkyl group is substituted and the ring Br
is replaced by H, as well as the expected ring-substituted products.
Amine addition to alkyl bromo-2(1H)-quinolone, -4(1H)-pyridone, and
-2(1H)-thiopyridine yielded alkyl substitution products.
Bromopyrimidinones underwent substitution of the Br by amines.
IT 36255-01-3P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)
RN 36255-01-3 CA
CN 4(1H)-Quinolinone, 2-methyl-3-(1-piperidiny)- (9CI) (CA INDEX NAME)



10/519208

L7 ANSWER 9 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 91:101842 CA
TITLE: Inhibition of rat passive cutaneous anaphylaxis by
3-(1H-tetrazol-5-yl)quinolines
AUTHOR(S): Erickson, Edward H.; Hainline, Carol F.; Lenon, Larry
S.; Matson, Charles J.; Rice, Thomas K.; Swingle, Karl
F.; Van Winkle, Michael
CORPORATE SOURCE: Riker Lab., 3M Co., St. Paul, MN, 55101, USA
SOURCE: Journal of Medicinal Chemistry (1979), 22(7), 816-23
CODEN: JMCMAR; ISSN: 0022-2623
DOCUMENT TYPE: Journal
LANGUAGE: English
GI



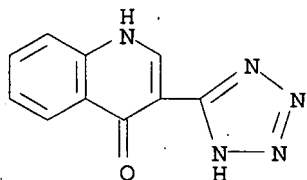
AB The title compds. I and II (R = H, Cl, F, alkyl, MeO, etc.; n = 0-2) were prepared either from 3-cyano-4-oxoquinolines or from Et 4-oxoquinolinecarboxylates, converted to the 4-chloro derivs., dehalogenated to esters, the esters hydrolyzed to the acids, these converted to the amides, the amides dehydrated to nitriles which were treated with NaN₃ to give I and II. I, II, and the quinoline-3-carboxylic acids III (R = H, Cl, F, CF₃, MeO, alkyl, etc.; n = 0-2) were evaluated orally and i.p. as inhibitors of passive cutaneous reaction in the rat. 8-Chloro-1,4-dihydro-4-oxo-3-(1H-tetrazol-5-yl)quinoline [71082-86-5] was more active than di-Na cromoglycate (i.p.) and doxantrazole (orally).

IT 71082-78-5P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and anaphylaxis-inhibiting activity of)

RN 71082-78-5 CA

CN 4(1H)-Quinolinone, 3-(1H-tetrazol-5-yl)- (9CI) (CA INDEX NAME)



10/519208

L7 ANSWER 10 OF 13 CA COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 87:5775 CA

TITLE: Heterocyclic synthesis with N-oxides. Preparation of pyridine N-oxide substituted chromones, chromanones, coumarins, quinolones, dihydroquinolones and cinnolones

AUTHOR(S): Connor, David T.; Young, Patricia A.; Von Strandtmann, Maximillian

CORPORATE SOURCE: Dep. Org. Chem., Warner-Lambert Res. Inst., Morris Plains, NJ, USA

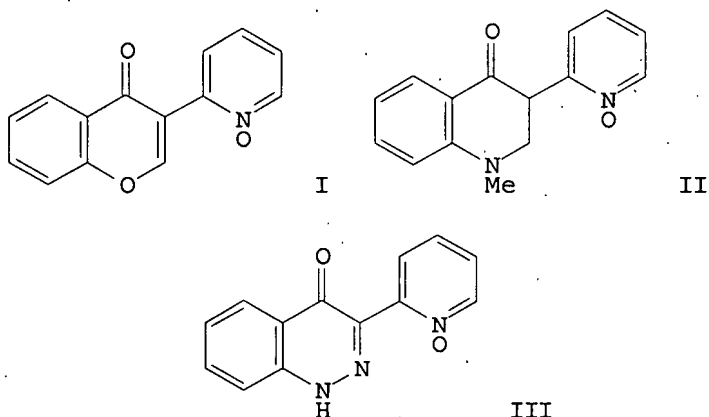
SOURCE: Journal of Heterocyclic Chemistry (1977), 14(1), 143-5
CODEN: JHTCAD; ISSN: 0022-152X

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 87:5775

GI



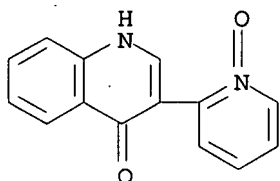
AB Pyridine N-oxide substituted chromones, chromanones, coumarins, quinolines, dihydroquinolines and cinnolines e.g. I, II, and III were prepared from 1-(2-hydroxyphenyl)-2-(2-pyridinyl)ethanone N-oxide (IV), 1-(2-aminophenyl)-2-(pyridinyl)ethanone N-oxide and 1-[2-(methylamino)phenyl]-2-(2-pyridinyl)ethanone N-oxide. Thus, IV was cyclized with (EtO)₃CH to give I.

IT 62615-12-7P

RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation of)

RN 62615-12-7 CA

CN 4(1H)-Quinolinone, 3-(1-oxido-2-pyridinyl)- (9CI) (CA INDEX NAME)

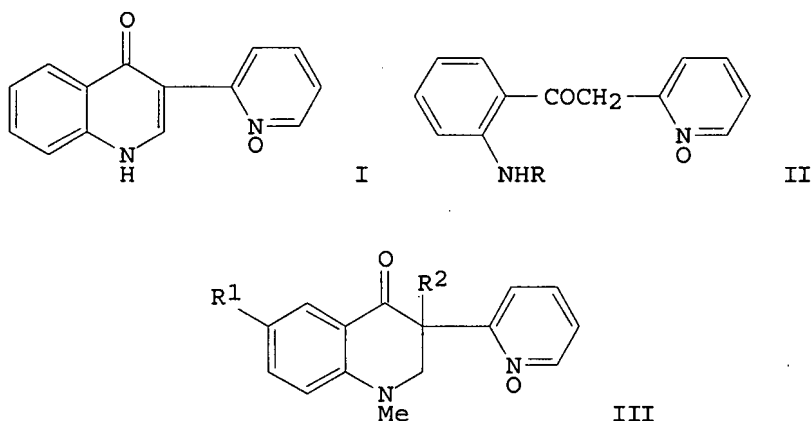


10/519208

10/519208

L7 ANSWER 11 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 86:171280 CA
TITLE: Substituted 3-(2-pyridinyl)-4(1H)-quinolinone N-oxides
INVENTOR(S): Connor, David T.; Young, Patricia A.; Von Strandtmann, Maximilian
PATENT ASSIGNEE(S): Warner-Lambert Co., USA
SOURCE: U.S., 5 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4007193	A	19770208	US 1975-611036	19750908
PRIORITY APPLN. INFO.: GI			US 1975-611036	A 19750908

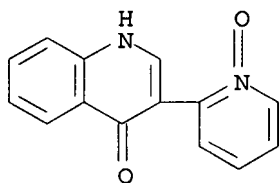


AB Pyridinylquinolinone I was obtained in 43% yield by treating the ketone II (R = H) with HC(OEt)₃. III (R₁ = H, R₂ = H, CH₂OH; R₁ = Cl, R₂ = H) were obtained in 49.5-62.2% yield by treating II (R = Me) with CH₂O. I gave a 55.2% decrease gastric acid volume at 20 mg/kg i.p. in rats. II (R₁ = Cl, R₂ = H) at 25 mg/kg gave 54% inhibition of passive cutaneous anaphylaxis.

IT 62615-12-7P
RL: SPN (Synthetic preparation); PREP (Preparation)
(preparation and stomach secretion-inhibiting activity of)

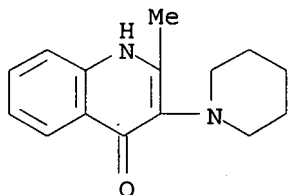
RN 62615-12-7 CA

CN 4(1H)-Quinolinone, 3-(1-oxido-2-pyridinyl)- (9CI) (CA INDEX NAME)



10/519208

L7 ANSWER 12 OF 13 CA COPYRIGHT 2007 ACS on STN
ACCESSION NUMBER: 76:140456 CA
TITLE: β -Substituted enamines. VII. 3-Amino- and
3-mercapto-4(1H)-quinolones
AUTHOR(S): Boehme, H.; Braun, R.
CORPORATE SOURCE: Pharm.-Chem. Inst., Univ. Marburg, Marburg/L., Fed.
Rep. Ger.
SOURCE: Archiv der Pharmazie und Berichte der Deutschen
Pharmazeutischen Gesellschaft (1972), 305(2), 93-6
CODEN: APBDAJ; ISSN: 0376-0367
DOCUMENT TYPE: Journal
LANGUAGE: German
GI For diagram(s), see printed CA Issue.
AB The quinolones (I, R = NHPh, piperidino, morpholino, SPh, or SCH₂CH₂Ph; R₁
= H, Me, or MeO, R₂ = H or MeO) were prepared in 72-91% yield by heating
3,4-R₂R₁C₆H₃NHCMe:C(R)CO₂Et in high boiling solvents, e.g. Ph₂O.
IT 36255-01-3P
RL: SPN (Synthetic preparation); PREP (Preparation
(preparation of)
RN 36255-01-3 CA
CN 4(1H)-Quinolinone, 2-methyl-3-(1-piperidinyl)- (9CI) (CA INDEX NAME)



L7 ANSWER 13 OF 13 CA COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 13:12820 CA

ORIGINAL REFERENCE NO.: 13:2518b-i,2519a-i,2520a-i,2521a-c

TITLE: Structure of hydroxyquinacridone

AUTHOR(S): Baczynski, W. L.; v. Niementowski, St.

CORPORATE SOURCE: Techn. Hochschule, Lwow

SOURCE: Berichte der Deutschen Chemischen Gesellschaft

[Abteilung] B: Abhandlungen (1919), 52B, 461-84

CODEN: BDCBAD; ISSN: 0365-9488

DOCUMENT TYPE: Journal

LANGUAGE: Unavailable

GI For diagram(s), see printed CA Issue.

AB cf. Ber. 39, 385(1906). The work described in this paper establishes that at least 95% of the hydroxyquinacridone (a) obtained from phloroglucinol and anthranilic acid has the angular structure I. Of the more common oxidizing agents CrO_3 , HNO_3 and KMnO_4 yield with it as the first product 4,5-diketo- β -quinacridone (II); to prepare II, 60 g. finely powdered a suspended in 1 l. AcOH is heated with an equal weight of $\text{K}_2\text{Cr}_2\text{O}_7$; at 80° an energetic reaction sets in and continues about 15 min.; the mixture is then heated 45 min. longer to boiling, allowed to stand 0.5 hr. and filtered; the precipitate is washed on the paper with AcOH , and then by decantation in a tall 2-l. beaker 6 times with large amts. of boiling H_2O acidified with AcOH ; the product still contains unchanged a (sometimes as much as 20%) but is sufficiently pure for certain purposes, such as cleavage with alkali. To obtain pure II, the precipitate is dried and boiled

out several times with large amts. of Me_2CO , PhNO_2 , PhOH or quinoline. Yield, 90%. With dilute HNO_3 as the oxidizing agent, the yield and purity of the II depend greatly on the concentration of the HNO_3 . Down to the minimum limit of

6% HNO_3 the yields are better with the more dilute acid; concentrated acid and

more prolonged reaction favor the formation of NO_2 derivs. Thus with 6% acid allowed to react 6 hrs., 0.5 of the a remains unchanged and the yield of H is 50%; the longer the reaction mixture is heated the greater is the yield of II but NO_2 derivs. begin to appear, but as the latter are easily removed with PhNO_2 , it is better to heat a longer time. Thus, 30 g. a gently boiled under an air condenser for 36 hrs. with 1. l. of 6% HNO_3 gives 80% II, II is a red microcryst. powder, m. 374° (decomposition), soluble (in minimal amts.) in boiling quinoline and PhNO_2 , from which it seps. on cooling in dark red spheres, easily soluble in concentrated H_2SO_4 with intense red. color and repptd. unchanged by pouring into H_2O , considerably less soluble in concentrated HCl , nitrated by HNO_3 , instantly turned black by alkalis but changed back to red by washing with H_2O (apparently owing to formation of unstable alkali salts hydrolyzed by H_2O); NH_4OH yields similar unstable black substances, probably amines. All attempts to obtain an azine with o- $\text{C}_6\text{H}_4(\text{NH}_2)_3$ have thus far failed; once a product was isolated having the composition calculated for the azine + 1 mol. AcOH , but in general the reaction seemed to consist in a reduction of II to the di-HO derivative while the diamine was apparently oxidized simultaneously to 2,3-diaminophenazine. The di-HO compound is also formed from SO_2 and II in the presence of Mn oxides, as, e. g., in the precipitate formed by the

oxidation of a with alkaline KMnO_4 . When 4 g. II suspended in 16 g. PhNH_2 is boiled 3 hrs. under a reflux, freed from excess of PhNH_2 with steam, dissolved in AcOH , filtered, precipitated with much H_2O , again dissolved in AcOH , filtered, diluted with H_2O , precipitated with NH_4OH and crystallized from AcOEt , there

are obtained two monoanilides, $\text{C}_{26}\text{H}_{15}\text{O}_3\text{N}_3 \cdot 3\text{H}_2\text{O}$: (1) (chief product), soluble in AcOEt , black crystals, softens 210° , m. completely 230° ,

soluble in organic solvents with more or less difficulty with green, in concentrated

H₂SO₄ with cherry-red color, insol. in H₂O, alkalies and dilute acids; (2) insol. in AcOEt, similar in appearance to (1), softens 300°, m.

about 320°. When 3 g. II is heated 5 hrs. at 210° in sealed tubes with 15 g. PhNH₂, the AcOEt-soluble anilide is formed.

Nitrohydroxy-β-quinacridone, obtained in 8 g. yield from 10 g. finely powdered a gently boiled 24 hrs. under an air condenser with 1 l. HNO₃ (d. 1.20) and filtered hot, is soluble in 40 parts boiling PhNO₂ and seps. on cooling in chestnut-brown needles, m. 330°, very difficultly soluble in hot alkalies and seps. unchanged in light yellow flocks, soluble in H₂SO₄ with yellow color, oxidized by CrO₃ to nitro-4,5-diketo-β-quinacridone, which is the chief product formed when 3 g. II is gently boiled 24 hrs. with 400 g. of HNO₃ (d. 1.2); it seps. from PhNO₂ in yellow, hair-like, crinkled needles, m. 340° (decomposition), barely soluble in traces in boiling alkalies, soluble in H₂SO₄ with yellow color. If

2

g. II are heated to incipient ebullition with 250 cc. HNO₃ (d. 1.2) until the solution is a clear pale orange NaCl ppts. on cooling dinitro-4,5-diketo-β-quinacridone in fine orange leaves with 1 H₂O, m. about 200° (foaming), easily soluble in NH₄OH and alkalies with pale brick-red color and repptd. by dilute HCl in light rust-colored flocks, soluble in H₂SO₄ with yellow to orange-red color, depending on the

concentration

When the HNO₃ filtrate from the product obtained by boiling 10 g. a 30 hrs. with 1 l. of 6% HNO₃ is fractionally precipitated with NaCl there is obtained a small amount of a benzo-m-phenanthrolinecarboxylic acid, needles from Me₂CO, m. 283° (decomposition), soluble with yellow color in NH₄OH, alkalies and dilute acids; silver salt, gray flocculent precipitate

with 1

H₂O; barium salt, pale yellow needles with 3 H₂O. The yield of this acid is hardly 1-2%; in 1 case, with HNO₃ of d. 1.033, 10% was obtained. If a consists exclusively of I, the acid must have the structure III or IV; when cautiously fused with 2 mols. m-C₆H₄(OH)₂ it yields a compound, probably C₁₆H₈O₃N₂.CO.O.C[C₆H₃(OH)₂]₂, indistinctly crystalline, dark chestnut-brown powder, becomes semi-liquid 123-5°, foams energetically 160-70°, soluble in alc. and H₂O with brown-yellow color and faint olive-green fluorescence, in KOH with reddish yellow color and considerably stronger fluorescence, precipitated by acids in reddish

rust-colored

flocks, soluble in H₂SO₄ with blue-green, in AcOH with yellow color; it probably contains a small amount of a fluorescein-like anhydride. The course of the oxidation of a with KMnO₄ varies greatly with the conditions; when 67 g. of the finely powdered a suspended in 4 l. of H₂O is slowly treated with an equal weight of KMnO₄ in cold saturated solution

(100-20

hrs. are required for complete decolorization), filtered, washed with 8-12 l. H₂O (which are afterwards concentrated to 1 l.) with the help of steam and fractionally precipitated with HCl, there is obtained 25% of a quinacridonic

acid

(V or VI), together with 50% of dihydroxyquinacridone (see below) and unchanged a; the acid is also obtained in 40% yield (with 20% of the diquinolonylenecarbinol described below) when 10 g. of finely powdered II in 400 cc. alc. is boiled 4 hrs. under a reflux with 30 g. KOH in the least possible amount of H₂O, filtered, boiled up with 400 cc. H₂O and

precipitated

from the combined filtrates, after distillation of the alc., with acids. It seps. from much MeOH in rhombic and 6-sided, solvated tables which lose their MeOH at room temperature, changing to a powder which turns orange 240-55°, softens 375°, m. 385°, soluble in alkalies and

carbonates, practically insol. in H₂O, dilmineral acids and AcOH, deliquesces in NH₄OH, yielding a solid ammonium salt only when the H₂O is completely removed; barium salt, microcryst, precipitate with 3 H₂O; acid ester, from 3 g. of the acid in 100 cc. alc. treated 1 hr. on the H₂O bath with HCl, then warmed 2 hrs. longer, concentrated to about 8 cc., separated from the small amount of neutral ester by shaking with Na₂CO₃ and precipitated with H₂SO₄, spherical light brown microscopical aggregates from alc., m. 240° (foaming); neutral ester, from 4 g. of the acid in 100 g. ace. boiled 10 hrs. with 10 g. concentrated H₂SO₄, concentrated to 20 cc., precipitated with H₂O, washed free of H₂SO₄ with H₂O, again precipitated from alc. by H₂O, fractionally crystallized from dilute alc. and finally from Me₂CO (4 l. per g. ester), canary-yellow 6-sided microtables, turns brownish orange 270°, contracts 280°, m. 417° (corrected), unattacked by cold soda, hydrolyzed on heating. When the acid is heated in the course of 2.5 hrs. to 300° and kept at that temperature 0.5 hr., loss of H₂O begins at 200° and is most brisk at 250-60°; some CO₂ is also lost, due to formation of the mono-CO₂H acid as a by-product, but the chief product (94 %) is the anhydride, almost white needles from PhNO₂, sinters about 422°, m. 437° (decomposition), insol. in cold NH₄OH, somewhat soluble on heating, easily soluble in boiling alkalies, separating unchanged if cooled immediately but regenerating the acid on long heating. In working up the Mn oxides precipitated in the preparation of V the SO₂ used to remove the Mn compds. reduces the II, which is present along with unchanged a, to 4,5-dihydroxy-β-guinacridone (b); the finely powdered organic material remaining after removal of the Mn compds. is boiled 15 min. in 100 parts alc. with an equal weight of KOH in the least possible amount of H₂O; the filtrate on cooling deposits dark green flocks of the K salt of b which on decomposition with H₂O yield the free b (yield, often 25% of the residue worked up), brownish yellow crystals, sinters 405°, decomp. about 425°; it is also found among the products of the action of o-C₆H₄(NH₂)₂ on II and can be obtained directly from II by means of SO₂. The crude V heated in 5-g. portions with 3 parts of 20% HCl in sealed tubes 4-6 hrs. at 200-10°, dissolved in NaOH, treated with steam for a short time to remove a volatile basic impurity which gives a grayblue precipitate with FeCl₃ and filtered hot yields exceedingly fine, voluminous, felted needles of the Na salt of γ,γ'-dihydroxy-α,β'-diquinolyl (c); the free c seps. from organic solvents in very fine needles, sinters about 380°, m. completely 430°, soluble in alkalies and NH₄OH with strong bluish fluorescence; the salts are easily hydrolyzed and only the potassium salt, C₁₈H₁₀O₂N₂K₂·6H₂O, was obtained in a form suitable for analysis by dissolving c in 120 parts of boiling 20% KOH, omitting all washing and analyzing immediately after draining and pressing out between clay plates. Either II or c heated in 2-g. portions with 15 parts Zn dust in H at red heat yields α,β'-diquinotyl. Aqueous KOH and II yield different products depending on the concentration of the KOH; if the freshly prepared, still moist II is boiled several days with 40 parts of 2.5% KOH, filtered and acidified with H₂SO₄ there is obtained a voluminous flocculent precipitate, changing after 12 hrs. into yellowish crystals, of diquinolonyleneglycolic acid (VII), becomes orange 150-250°, does not visibly change further up to 400°, m. 456-9° (as the carbinol below), soluble in concentrated H₂SO₄ with orange-red color; the elimination of CO₂ can be effected even by long heating in alkalies, so that the VII is usually accompanied by diquinolonylenecarbinol, which is obtained exclusively by boiling II with 30 parts of 10% KOH until the

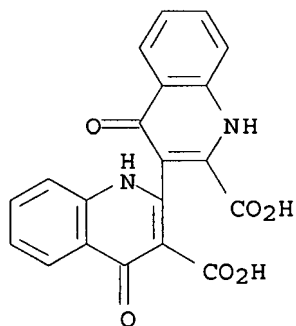
10/519208

24 solution becomes light red and crystallization of the K salt begins (at least hrs.); the solution is diluted with 2 vols. H₂O, boiled up and filtered hot; the carbinol, obtained by decomposing the resulting difficultly soluble potassium salt (fine red needles with 2 H₂O) with H₂SO₄ seps. in orange-red needles, m. 456-9°, soluble in boiling quinoline with crimson color, in H₂SO₄ with wine-yellow to orange color and precipitated by pouring into H₂O in rustcolored flocks.

IT 861778-79-2, 2,3'-Bi[quinoline]-3,2'-dicarboxylic acid, 1,1',4,4'-tetrahydro-4,4'-diketo- (and derivs.)

RN 861778-79-2 CA

CN 2,3'-Bi[quinoline]-3,2'-dicarboxylic acid, 1,1',4,4'-tetrahydro-4,4'-diketo- (2CI) (CA INDEX NAME)



10/519208

=> FIL STNGUIDE
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
65.58	409.54

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
-9.49	-9.49

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FILE CONTAINS CURRENT INFORMATION.
LAST RELOADED: Aug 24, 2007 (20070824/UP).

=> d his

(FILE 'HOME' ENTERED AT 13:37:27 ON 27 AUG 2007)

FILE 'REGISTRY' ENTERED AT 13:37:35 ON 27 AUG 2007

L1	STRUCTURE UPLOADED
L2	59 S L1 FULL
L3	STRUCTURE UPLOADED
L4	21 S L3 FULL

FILE 'CA' ENTERED AT 13:38:17 ON 27 AUG 2007

L5	1 S L4
L6	14 S L2
L7	13 S L6 NOT L5

FILE 'STNGUIDE' ENTERED AT 13:38:52 ON 27 AUG 2007

=>

---Logging off of STN---

=>

Executing the logoff script...

=> LOG Y

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.18	409.72

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

SINCE FILE	TOTAL
ENTRY	SESSION
0.00	-9.49

CA SUBSCRIBER PRICE

STN INTERNATIONAL LOGOFF AT 13:40:40 ON 27 AUG 2007